

Shaking the *Sell* Habit

Water Quality

The City of Fresno offers its customers high-quality water that meets state and federal standards. Even so, drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Contaminants that may be present in Source Water include:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Tables 1-5: Primary Standards and Unregulated Contaminants

The following tables list all the drinking water contaminants that were tested for during the 2007 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing that occurred from Jan. 1 through Dec. 31, 2007. The State requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data contained in this report, though representative of the water quality, is more than one year old.

Terms And Abbreviations

n/a: not applicable
NTU: Nephelometric Turbidity Unit (a measure of light)
nd: not detectable at testing limits
ng/L: nanograms per liter or parts per trillion.
ug/L: micrograms per liter or parts per billion
mg/L: milligrams per liter or parts per million
pCi/L: picocuries per liter (a measure of radiation)
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Public Health Goals (or Maximum Contaminant Level Goals) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set the U.S. Environmental Protection Agency.

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

Table 1: PRIMARY STANDARDS AND UNREGULATED CONTAMINANTS							
Chemical Table	MCL	PHG (MCLG)	Fresno Average	Range of Detection's	MCL Violation	Last Sampled	Typical Source of Contaminant
Volatile Organic Contaminants							
1,1-Dichloroethylene (ug/L) (1)	6	10	0.24	nd - 16	NO	2004	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ug/L)	6	(70)	0.24	nd - 4.2	NO	2007	Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination
Tetrachloroethylene (PCE) (ug/L) (2)	5	0.06	0.14	nd - 2.2	NO	2007	Discharge from factories, drycleaners, and auto shops (metal degreaser)
Total Trihalomethanes (TTHM) (ug/L)	80	n/a	4.70	nd - 19	NO	2007	Byproduct of drinking water chlorination
Halooacetic Acids (HAA5) (ug/L)	60	n/a	1.40	nd - 7.7	NO	2007	Byproduct of drinking water chlorination
Trichloroethylene (TCE) (ug/L) (3)	5	0.8	0.17	nd - 4.0	NO	2007	Discharge from metal degreasing sites and other factories
Synthetic Organic Contaminants							
Dibromochloropropane (DBCP) (ng/L) (2)	200	1.7	49	nd - 260	NO	2007	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Ethylene Dibromide (EDB) (ng/L)	50	(0)	0.2	nd - 24	NO	2007	Discharge from petroleum refineries; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching from grain and fruit crops
Inorganic Contaminants							
Aluminum (AL) (ug/L)	1000	0.6	2.18	nd - 150	NO	2005	Erosion of natural deposits; residue from some surface water treatment plants
Arsenic (As) (ug/L)	50	0.004	1.810	nd - 7	NO	2005	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (Ba) (mg/L)	1	(2)	0.008	nd- 0.15	NO	2005	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (Total Cr) (ug/L)	50	(100)	0.060	nd - 11	NO	2005	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ug/L)	2000	1000	10	nd - 200	NO	2005	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (NO3) (mg/L)	45	45	22	0 - 47	NO	2007	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radionuclides							
Gross Alpha (pCi/L)	15	n/a	3.19	-1.53 - 22.90	NO	2007	Erosion of natural deposits
Radium 226 (pCi/L)	3	n/a	0.72	-0.12 - 3.84	NO	2007	Erosion of natural deposits
Radium 228 (pCi/L)	2	n/a	0.60	-0.22 - 2.3	NO	2007	Erosion of natural deposits
Uranium (pCi/L)	20	0.5	5.89	nd - 16	NO	2007	Erosion of natural deposits
Unregulated Contaminants (ICR, UCMR & Misc)							
2,4-Dinitrotoluene	n/a		0.004	nd - < 0.8	n/a	2002	We are required by regulations to monitor for certain unregulated contaminants. This is helpful to the USEPA and CDPH for tracking the location of contaminants and whether there is a need for stricter regulations. Several contaminants indicate detected values with a “<” symbol meaning less than. There are two possible reasons for this. First, the Detection Limit for Reporting, DLR, has not been established by EPA or CDPH. Second, for various reasons, the analytical equipment is unable to quantify the value below the stated “less than” value but analysis indicates the contaminant is present. For either reason, the concentration cannot be quantified and the City must assume that a “Fresno Average” is not applicable for this report.
4,4-DDE	n/a		0.0	nod - < 0.8	n/a	2002	
Boron	n/a		0.0	nd - < 100	n/a	2002	
DCPA Diacid + Monoacid	n/a		0.969	nd - 4.7	n/a	2004	
Dichlorodifluoromethane (Freon 12)	n/a		0.580	nd - 18	n/a	2007	
EPTC (EPTAM)	n/a		0.0	nd - < 1	n/a	2002	
Hexavalent Chromium	n/a		2.450	nd - 7.9	n/a	2002	
Methyl tert-Butyl Ether (MTBE)	n/a		0.0	nd - < 5	n/a	2002	
Molinate (Ordram)	n/a		0.030	nd - 5.7	n/a	2002	
Nitrobenzene	n/a		0.0	nd - < 10	n/a	2002	
Perchlorate	n/a		0.0	nd - < 40	n/a	2002	
Trichloropropane (1,2,3-TCP) (5)	n/a		0.003	nd - 0.13 *	n/a	2007	
Vanadium	n/a		19.800	3 - 50	n/a	2002	
Bromodichloromethane (THM)	n/a		1.11	nd - 6.4	n/a	2005	
Bromoform (THM)	n/a		0.05	nd - 2.1	n/a	2007	
Chloroform (THM)	n/a		0.05	nd - 1.5	n/a	2007	
Dibromochloromethane (THM)	n/a		0.41	nd - 1.9	n/a	2005	

(1) 1,1-Dichloroethylene (1,1-DCE) A single well, PS 201, last operated in 2004 and located near Cedar and Church, had detectable amounts of this contaminant in the raw water. During operations of this well, several intermittent results in both the raw and treated water produced results above the Maximum Contaminant Level. Special testing was conducted under the advisement of the State Health Department in order to determine the cause of these intermittent results. This testing failed to identify the cause and the City elected to remove the well from service. Some people who use water containing 1,1-DCE in excess of the MCL over many years may have an increased risk of developing cancer.

(2) Dibromochloropropane (DBCP) PS 171-2 located near Dakota and Cornelia is monitored monthly because of elevated DBCP levels. The average of all results show this well is under the MCL; however, there was one result above the MCL. Determination as to whether a well exceeds an MCL for non-acute contaminants such as DBCP is based on a running average for a specified period of time. Therefore, a well may have several results above the MCL yet still meet drinking water standards. PS 182-2, a treatment site for the removal of DBCP, had a single result above the MCL. Unlike a typical treatment site where it takes several months to occur, the effluent result at this site went from .01 ug/L to .026 ug/l in less than one month. Some people who use water containing DBCP in excess of the MCL over many years may experience reproductive problems and may have an increased risk of developing cancer.

(3) RADIONUCLIDES, including Gross Alpha, Radium 226 and Radium 228 are sampled on various schedules, depending on the results for previous samples. The well may be sampled as often as every three years but no longer than nine years. Compliance is based on the average of four quarters. Several well sites had samples that exceeded the MCL for a specific sample date. Some people who drink water containing these constituents over many years may have an increased risk of getting cancer.

(4) Trichloropropane (1,2,3-TCP) The USEPA periodically requires utilities to conduct monitoring of unregulated contaminants such as 1,2,3-TCP, which was detected in 30 Fresno wells. The State of California has created a regulatory notification level of 0.005 ppb, which is also the detection limit for reporting. At the request of DPH in 2004, well site 63 was removed from service, located near McKinley and Chestnut, which exceeds 100 times the action level. The City continues annual monitoring of the affected wells.

(5) Two wells, 118 and 203, had elevated levels of iron exceeding the aesthetic standards. Previous and additional samples were non-detectable.

(6) A single well, PS 249, exceeded the aesthetic standard for turbidity. The well was operated for just a few minutes before the sample was collected. Occasionally, very short run times can contribute to higher turbidity results. This well only operated for three days in 2005 due to mechanical issues and a resample was not possible. This site remains offline. Previous historical sample results from this site were well within standards.

Table 2: MICRO BIOLOGICAL CONTAMINANTS					
Over 220 bacteriological samples are collected every month in Fresno's distribution system. In addition, over 300 bacteriological samples are collected from wells and treatment sites.					
Contaminant	Highest No. of Detection's	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	5 of 245 or 1.9%	0	5%	0	Naturally present in the environment
E.coli	0	0	A routine sample is positive for E.coli and a repeat sample is positive for total, fecal or E.coli bacteria	0	Human or animal fecal waste

Table 3: LEAD AND COPPER						
Lead and Copper samples are collected from wells, the distribution system and from inside residences.						
Contaminant	No. of Samples Collected	90th Percentile Level Detected	No. of Sites Exceeding Action Level	Action Level	MCLG	Typical Source of Contaminant
Lead (ug/L) (Sampled in 2006)	51	0.00	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (mg/L) (Sampled in 2006)	51	0.13	0	1.3	0.17	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table 4: SECONDARY STANDARDS CONTAMINANTS LIST					
Secondary standards are based on aesthetic factors (taste, appearance and odor, etc.) and are not health related.					
Inorganic Contaminants	MCL	Fresno Average	Range of Detection's	MCL Violation	Last Sampled
Aluminum (ug/L)	200	2.18	nd - 150	No	2005
Apparent Color (Unfiltered)	15	1.17	nd - 15	No	2005
Chloride (Cl) (mg/L)	500	8.65	2 - 56	No	2005
Iron (Fe) (ug/L)	300	13.73	nd - 420	Yes (5)	2005
Manganese (Mn) (ug/L)	50	0.10	nd - 20	No	2005
Odor (Threshold @ 60 C) (units)	3	1	2	No	2005
Sodium (Na) (mg/L)	n/a	19.56	3 - 63	No	2005
Specific Conductance (E.C.) (umho/cm+)	1600	298	95 - 800	No	2005
Sulfate (SO4) (mg/L)	500	10.07	0 - 10	No	2005
Total Dissolved Solids (TDS) (mg/L)	1000	220.56	97 - 480	No	2005
Total Hardness (as CaCO3) (mg/L)	n/a	127.12	32 - 280	No	2005
Turbidity (Lab) (units)	5	0.29	0.10 - 6.8	Yes (6)	2005
Zinc (Zn) (mg/L)	5000	2.55	nd - 490	No	2005

Table 5: TURBIDITY IN NORTH EAST FRESNO RELATED TO SURFACE WATER TREATMENT PLANT OPERATIONS							
Turbidity is a measurement of the cloudiness of the water determined by the ratio of the intensity of light scattered by the sample to the intensity of incident light. We monitor it because it is a good indicator of the effectiveness of our filtration system.							
	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source
Turbidity (NTU)	TT = 1 NTU	n/a	0.105	n/a	11-Jan-07	n/a	Soil runoff
	TT = 95% of samples <0.3 NTU	n/a	100%		Continuous	n/a	

¡ADVERTENCIA de SEQUIA!

El Gobernador ordena un uso reducido de agua

Después de dos años consecutivos de lluvia por debajo de su promedio normal, el Gobernador Arnold Schwarzenegger ha declarado una sequía estatal. Como resultado, el Alcalde Alan Autry ha ordenado que el primer paso del Plan de Contingencia de Escasez de Agua entre en efecto, el cual incluye un 10% de reducción voluntaria en el uso de agua por los ciudadanos de Fresno. Es esencial que todos los ciudadanos participen en esta reducción voluntaria para que de esta manera se reduzcan los efectos a largo plazo de la sequía y para evitar restricciones más severas de uso de agua en el futuro.

¿Que Puede Usted Hacer?

Doing any combination of the following can help save literally hundreds of gallons of water per day. El hacer una combinación de lo siguiente puede ayudar a ahorrar literalmente cientos de galones de agua por día.

- **Siga el horario de riego exterior.**
- **Repare inmediatamente llaves y sanitarios que estén goteando**
- **No “riegue de mas” el pasto, árboles, y plantas.**
- **Instale sanitarios de alta eficiencia por toda la casa.**
- **Reemplacé la lavadora por una de alta eficiencia.**
- **Tome baños cortos.**
- **Use siempre una pistola controladora de presión en la manguera del jardín.**
- **Apagué el agua cuando se este afeitando, cepillando los dientes, o lavando los platos.**

Para información acerca de sanitarios ahorradores de dinero y reembolsos para lavadoras, o para reportar desperdicio de agua, por favor llame a la división de Agua de la Ciudad de Fresno al 621-5480.

También nos gustaría agradecerles de antemano por su cooperación.